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EXAMINER
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COLAN, GIOVANNA B

ART UNIT	PAPER NUMBER
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2162

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/758,061

Applicant(s)

MOORE, JOHN A.

Examiner

Giovanna Colan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 September 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-10,12-15 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-10,12-15 and 17-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This action is issued in response to the Amendment filed on 09/04/2007.
2. No claims were amended. Claims 2, 11, and 16 were canceled. No claims were added.
3. This action is made Final.
4. Claims 1, 3 – 10, 12 – 15, and 17 – 20 are pending in this application.
5. Applicant's arguments filed on 09/04/2007 have been fully considered but they are not persuasive.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 1, 5 – 10, 12 – 15, and 17 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toda et al. (Toda hereinafter) (US Patent No. 2002/0037100 A1, filed: August 20, 2001) in view of BABA et al. (BABA hereinafter) (US Patent Pub. No. 2001/0014172 A1, issued: August 16, 2001).**

Regarding Claim 1, Toda discloses a method for managing image files in a host system comprising:

identifying an image file stored in secondary storage for a host system (Page 8, [0135], lines 5 – 10, Toda);

comparing file metadata for the identified image file to a downgrade threshold (Page 6, [0094], lines 3 – 7, if the number of areas with large coefficients of high-frequency portions ... result is equal to or larger than a threshold value, Toda);

downgrading the identified image file (Page 8, [0135], lines 1 – 5, Toda) in response to the comparison of the file metadata to the downgrade threshold (Page 6, [0096], lines 7 – 9, ... if the sum total is equal to or larger than threshold value m, the parameter “1/2” may be selected ..., Toda);

storing the downgraded file in secondary storage of the host system (Fig. 28 and Page 9, [0142], “The binarization unit 2902 generates a binary image on the basis of the color document image 2901 loaded onto the RAM 2802...” and further “The generated binary image is stored in an area different from which storage the color document image 2901 in the RAM 2802”; wherein the RAM 2809 corresponds to the secondary storage of the host system as claimed; Toda).

Toda also discloses storing image file in tertiary storage of the host system (Fig. 28, item 2804, Page 8, [0135], lines 4 – 10; besides the “external storage device” Toda additionally discloses another storage in the host system: see “ROM” 2803 in Fig. 28, Toda). However, Toda does not explicitly disclose: storing the identified image file in tertiary storage of the host system, tertiary storage of the host system having an access time that is greater than the access time for the secondary storage of the host system. On the other hand, BABA discloses storing the identified image file in tertiary storage of

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the host system, tertiary storage of the host system having an access time that is greater than the access time for the secondary storage of the host system (Page 7, [0102], lines 9 – 15; "...original image are stored in an external storage device, such as a hard drive device, which is then accessed for performing image data processing operations...", BABA).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the BABA's teachings to the system Toda. Skilled artisan would have been motivated to do so, as suggested by BABA (BABA), to provide an image data conversion method whereby image data of images recorded on a holographic stereogram can be generated speedily from plural images from which has originated the holographic stereogram; and to reduce the time since the entry of the images from which the holographic stereogram is derived until completion of holographic stereogram. In addition, both of the references (Toda and BABA) teach features that are directed to analogous art and they are directed to the same field of endeavor, such as, databases management systems, downgrading image files, storing downgraded file in the secondary storage of the host system, and storing image file in tertiary storage. This close relation between both of the references highly suggests an expectation of success.

Regarding Claim 5, the combination of Toda in view of BABA discloses a method, the downgrading of the identified image file further comprising:

reducing resolution of the identified image file to generate the downgraded file (Page 1, [0006], lines 14 – 19, ... resolution conversion means for generating reduced non-text multi-valued image data by lowering a resolution of the non-text multivalued image data ..., Toda).

Regarding Claim 6, the combination of Toda in view of BABA discloses a method, the downgrading of the identified image file further comprising:

reducing pixel size in the identified image file to generate the downgraded file (Page 4, [0063], lines 6 – 9, ... black pixels corresponding to change portions from background to characters ... by a scanner are reduced to generate a new binary image “newbi” ...,Toda).

Regarding Claim 7, the combination of Toda in view of BABA discloses a method, the downgrading of the identified image file further comprising:

converting a color image from one color format to another color format that requires less data to represent color in the identified image file to generate the downgraded file (Page 9, [0150], lines 2 – 5, ... color data may be converted from an RGB format into an LAB or YcrCb format ..., Toda).

Regarding Claim 8, the combination of Toda in view of BABA discloses a method, the downgrading of the identified image file further comprising:

converting a color image to a color palette version of the color image to generate the downgraded file (Page 1, [0007], lines 10 – 17, ... color palette generation means for generating at least one color palette as the representative color data ..., Toda).

Regarding Claim 9, the combination of Toda in view of BABA discloses a method, the downgrading of the identified image file further comprising:

combining a plurality of downgrade operations to reduce the size of the identified image file to generate the downgraded file (Page 8, [0135], lines 3 – 5, image compression process using programs, Toda).

Regarding Claim 10, the combination of Toda in view of BABA discloses a method, the downgrading of the identified image file further comprising:

retrieving a full resolution version of the identified image file from tertiary storage (Fig. 1, items 100, 104, and 105, Page 3, [0049], lines 15 – 16, Toda<sup>1</sup>); and

performing a downgrade operation on the full resolution version of the identified image file to generate the downgraded file (Fig. 1, items 105, and 106, Page 3, [0049] and [0053], lines 15 – 16 and 1 – 3, lower its resolution; respectively, Toda).

Regarding Claim 12, the combination of Toda in view of BABA discloses a method, the comparison of the file metadata to the downgrade threshold including:

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<sup>1</sup> Wherein the image A (before reduction) corresponds to the full resolution version of the identified image file claimed.

comparing file metadata to a file access frequency threshold (Page 4 and 6, [0064] and [0094], lines 2 – 5 and 1 – 7; respectively, “ If the number of areas with large coefficients of high-frequency portions...”Toda).

Regarding Claim 13, the combination of Toda in view of BABA discloses a method, the comparison of the file metadata to the downgrade threshold including:

comparing file metadata to a last access time threshold (Page 4 and 6, [0064] and [0094], lines 2 – 5 and 1 – 7; respectively, Toda; and Page 7, [0102], lines 9 – 15, “...original image are stored in an external storage device, such as a hard drive device, which is then accessed for performing image data processing operations...”, BABA).

Regarding Claim 14, the combination of Toda in view of BABA discloses a method, the comparison of the file metadata to the downgrade threshold including:

comparing file metadata to a classification threshold (Page 5, [0087] and [0089], lines 8 – 10 and 11 – 16; respectively, Toda<sup>2</sup>).

Regarding Claim 15, the combination of Toda in view of BABA discloses a system for managing image files in a host system comprising:

a file data volume for storing file metadata that corresponds to image file stored in a secondary storage for a host system (Fig. 7 and 8, Page 3, and 9, [0055], [0056], and [0142], lines 10 – 13, 1 – 5, and 12 – 14; respectively; “the sets of black pixels



shown in FIG. 7 form text areas...”, “...these sets of black pixels are grouped based on near positions, and matches of widths and heights, 17 text areas can be detected, as shown in FIG. 8. The coordinate data of these areas are stored in a RAM (not shown) as text area coordinate data 109 shown in FIG.1.”; wherein the pixels corresponds to file metadata as claimed; and wherein the text areas formed by the pixels corresponds to file data volume as claimed; Toda; and also see – Page 8, [0135], lines 5 – 10, Toda);

a file selector for retrieving file metadata from the file data volume (Page 5, [0087], lines 1 – 8; “...one or more text areas are extracted from the image ...”; wherein the “text area detector” corresponds to the file selector claimed; Toda) and comparing the retrieved metadata to at least one downgrade threshold to identify an image file stored in the secondary storage of the host system for downgrading (Page 5 and 6, [0088] and [0094], lines 8 – 12 and 3 – 7; respectively; “...binarizes a pixel to black if the absolute value exceeds a threshold value or white if the absolute value does not exceed the threshold value...”, and “... if the number of areas with large coefficients of high-frequency portions ... result is equal to or larger than a threshold value...”, Toda); and

a file reducer for downgrading the identified image file (Page 8, [0135], lines 5 – 7, image compression process, Toda); and

a file controller for generating file metadata for storage in the file data volume (Page 5, [0087], lines 1 – 8, Toda) and for storing the downgraded file in the secondary storage of the host storage system (Fig. 28 and Page 9, [0142], “The binarization unit 2902 generates a binary image on the basis of the color document image 2901 loaded

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<sup>2</sup> Wherein the step which binarizes a pixel to black or to white if the absolute value exceeds or not a

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onto the RAM 2802..." and further "The generated binary image is stored in an area different from which storage the color document image 2901 in the RAM 2802"; wherein the RAM 2809 corresponds to the secondary storage of the host system as claimed; Toda) and for storing the identified image file in tertiary storage of the host system, tertiary storage of the host system having an access time that is greater than the access time for the secondary storage of the host system (Fig. 28, item 2804, Page 8, [0135], lines 4 – 10, external storage device, Toda; and Page 7, [0102], lines 9 – 15, "...original image are stored in an external storage device, such as a hard drive device, which is then accessed for performing image data processing operations...", BABA).

Regarding Claim 17, the combination of Toda in view of BABA discloses a system wherein the file reducer includes a compressor for compressing the identified image file (Page 3, [0049], lines 17 – 19, compression unit, Toda).

Regarding Claim 18, the combination of Toda in view of BABA discloses a system wherein the file reducer includes a color reducer for converting a color image from one color format to another color format that uses less data to represent color (Page 3, and 9, [0049] and [0150], lines 15 – 19 and 2 – 5; respectively, reduction unit, Toda).

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threshold value corresponds to the step of comparing as claimed; and the threshold value corresponds to the classification threshold as claimed.

Regarding Claim 19, the combination of Toda in view of BABA discloses a system wherein the file reducer includes an image resolution reducer for reducing resolution of the identified image file (Page 6, [0093], lines 1 – 6, Toda).

Regarding Claim 20, the combination of Toda in view of BABA discloses a system wherein the file reducer includes a pixel size reducer for reducing a number of bits to represent a pixel in the identified image file (Page 6, [0103], and [0106], lines 1 – 3 and 3 – 6, color reducer; respectively, Toda).

**8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toda et al. (Toda hereinafter) (US Patent No. 2002/0037100 A1, filed: August 20, 2001), in view of BABA et al. (BABA hereinafter) (US Patent Pub. No. 2001/0014172 A1, issued: August 16, 2001), and further in view of Gleicher et al. (Gleicher hereinafter) (US Patent No. 5,218,431, issued: June 8, 1993).**

Regarding Claim 3, the combination of Toda in view of BABA discloses all the limitations as disclosed above including downgrading an image file (Page 8, [0135], lines 1 – 5, Toda). However, the combination of Toda in view of BABA is silent with respect to lossless compression. On the other hand, Gleicher discloses a system and method that performs a lossless compression on the identified image file (Col. 4, lines 52 – 57, Gleicher). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the Gleicher's teachings to the system of

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the combination of Toda in view of BABA. Skilled artisan would have been motivated to do so, as suggested by Gleicher (Col. 4, lines 52 – 57, Gleicher), to provide a method such that original image can be reconstructed exactly, with no loss of information, on the same computer that compressed it or on a smaller scientific or engineering workstation. In addition, the applied references (Toda, BABA, and Gleicher) teach features that are directed to analogous art and they are directed to the same field of endeavor, such as, databases management systems, image compression, and downgrading images. This close relation between the applied references highly suggests an expectation of success.

**9. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toda et al. (Toda hereinafter) (US Patent No. 2002/0037100 A1, filed: August 20, 2001), in view of BABA et al. (BABA hereinafter) (US Patent Pub. No. 2001/0014172 A1, issued: August 16, 2001), and further in view of Bryniarski et al. (Bryniarski hereinafter) (US Patent No. 5,974,182, issued: October 26, 1999).**

Regarding Claim 4, the combination of Toda in view of BABA discloses all the limitations as disclosed above including downgrading an image file (Page 8, [0135], lines 1 – 5, Toda). However, the combination of Toda in view of BABA is silent with respect to lossy compression. On the other hand, Bryniarski discloses a system and method that performs a lossy compression on the identified image file (Col. 2, lines 62 – 65, Bryniarski). It would have been obvious to one of ordinary skill in the art at the time

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the invention was made to incorporate the Bryniarski's teachings to the system of the combination of Toda in view of BABA. Skilled artisan would have been motivated to do so, as suggested by Bryniarski (Col. 1, lines 29 – 32, Bryniarski), to provide a higher compression rate without visible degradation in an image, by taken advantage of the human visual system threshold. In addition, the applied references (Toda, BABA, and Bryniarski) teach features that are directed to analogous art and they are directed to the same field of endeavor, such as, databases management systems, image compression, and downgrading images. This close relation between the applied references highly suggests an expectation of success.

### ***Response to Arguments***

1. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208

USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

2. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "storage of **the final compressed image...**", "**preservation of the original image file**", "regarding the storage of the **compressed document after compression**", "the **original downloaded image being stored in memory that is slower than memory from which the original color document**", "...a third storage type...", "...the storage of the downgraded document") are not recited in the rejected claim(s). **As stated in a previous Final Office Action (Office Action dated November 25, 2006), although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).** USPTO personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim should not be read into the claim. *E-Pass Techs., Inc. v. 3Com Corp.*, 343 F.3d 1364, 1369, 67 USPQ2d 1947, 1950 (Fed. Cir. 2003) (claims must be interpreted "in view of the specification" without importing limitations from the specification into the claims unnecessarily). *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541,550- 551 (CCPA 1969). See also *In re Zletz*, 893 F.2d 319,321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989)

3. Applicant argues that; “Without the storing of the downgraded document in the secondary storage from which the original file was taken and the storing of the original file in the tertiary storage that is slower than the secondary storage, no prima facie case of obviousness can be made”. Applicant further argues that; “no argument has been made that BABA supplies the storing of the downgraded file in the secondary storage in which the original file was stored and no argument can be made that BABA discloses the storing of the original file in a third type of memory because it only describes two types of memory”.

Examiner respectfully disagrees. First, the examiner makes note that the features: “original file was taken”, “storing of **the original file** in tertiary storage **that is slower than the secondary storage**”, and “third storage type” are not recited in the claimed limitations (Refer to response to argument #2 discussed in this Office Action above). Second, the combination of Toda in view of BABA does disclose the recited claim limitation: storing the downgraded file in the secondary storage of the host system (Fig. 28 and Page 9, [0142], “The binarization unit 2902 generates a binary image on the basis of the color document image 2901 loaded onto the RAM 2802...” and further “The generated binary image is stored in an area different from which storage the color document image 2901 **in the RAM 2802**”; wherein the RAM 2809 corresponds to the secondary storage of the host system as claimed; Toda); and storing the identified image file in tertiary storage of the host system (Fig. 28, item 2804, Page 8, [0135], lines 4 – 10; besides the “external storage device” Toda additionally discloses another storage in the host system: see “ROM” 2803 in Fig. 28, Toda; and Page 7, [0102], lines

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9 – 15, BABA), tertiary storage of the host system having an access time that is greater than the access time for the secondary storage of the host system (Page 7, [0102], lines 1 – 15, "...original image data are stored in an external storage device, such as a hard disc drive device, which is then accessed for performing image data processing operations...since the external storage device, such as the hard disc device, is slow in processing speed and hence an extremely long time is consumed...", wherein the examiner interprets BABA's external device as the tertiary storage of the host system claimed; additionally BABA discloses two other storage devices: recording unit in page 4 in [0071] and internal device in page 7 in [0101], BABA).

4. Applicant argues that the applied art fails to disclose; "that a color palette converted image file is stored in secondary, from which the original image document was retrieved", "the storage of the filed processed with the use of color palettes", and "conversion of a color image to a color palette version".

Examiner respectfully disagrees. First, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "...from which the original image document was retrieved" and "the storage of the **filed processed with** the use of color palettes") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).



Second, the combination of Toda in view of BABA does disclose does disclose converting of a color image to a color palette version (Page 1, [0007], lines 10 – 17, "... color palette generation means for generating at least one color palette as the representative color data ...", Toda).

5. Applicant argues that the applied art fails to disclose; "an image file reduced in size by a plurality of downgrade operations is stored in secondary storage, from which the original image document was retrieved", "the storage of the filed processed by the system", and "a plurality of downgrade operations being performed on an image file and the storage of the original file in tertiary storage while the file downgraded by the plurality of downgrade operations is stored in the secondary storage in which the original file was stored".

Examiner respectfully disagrees. First, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "...from which the original image document was retrieved", "the storage of the **filed processed with** the use of color palettes", "...the **storage of the original file** in tertiary storage while the file downgraded by the plurality of downgrade operations is stored in the secondary storage **in which the original file was stored**) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

6. Applicant argues that the applied art fails to disclose; "retrieval of a full resolution image file from tertiary storage that is slower than secondary storage, performance of a downgrade operation on the full resolution image file to generate a downgrade file, and the storage of the downgraded file in secondary storage".

Examiner respectfully disagrees. First, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "...a full resolution image file from tertiary storage that is slower than secondary storage...") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

7. Applicant argues that the applied art fails to disclose; "a file access frequency threshold", and "the number of times that a file has been accessed for a particular time period".

Examiner respectfully disagrees. First, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "...the number of times that a file has been accessed for a particular time period ...") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the

specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Second, as discussed in Office Action dated May 26, 2007, the combination of Toda in view of BABA does disclose a file access frequency threshold (Page 4 and 6, [0064] and [0094], lines 2 – 5 and 1 – 7; respectively, “ If the number of areas with large coefficients of high-frequency portions...”Toda).

8. Applicant argues that the applied art fails to disclose; “ downgrade operation on an identified file stored in secondary storage be performed in response to a comparison of file metadata to a last access time threshold, that the downgraded file be stored in the secondary storage, and that the identified file be stored in tertiary storage”.

Examiner respectfully disagrees. The combination of Toda in view of BABA does disclose such limitations (Page 4 and 6, [0064] and [0094], lines 2 – 5 and 1 – 7; respectively, Toda; and Page 7, [0102], lines 9 – 15, BABA). Also see response to argument #3 discussed in this Office Action above.

9. Applicant argues that; “The Examiner clearly recognized that a histogram is not part of a file, but is data derived or about the file. The inconsistent use of metadata by the Examiner does not comport with the use of that term in the art, as indicated by the website reference above, and by Applicant’s specification, passim” and further argues that the applied art fails to disclose; “ comparison of file metadata to a classification threshold...”

Examiner respectfully disagrees. Contrary to applicant's assertions, the examiner never recognizes that "that a histogram is not part of a file, but is data derived or about the file" in the Non-Final Office Action dated May 26, 2007.

The combination of Toda in view of BABA does disclose comparing file metadata to a classification threshold (Page 5, [0087] and [0089], lines 8 – 10 and 11 – 16; respectively, wherein the step which binarizes a pixel to black or to white if the absolute value exceeds or not a threshold value corresponds to the step of comparing as claimed; and the threshold value corresponds to the classification threshold as claimed, Toda). Examiner makes note that since metadata is data about data and pixel is the smallest element of an image; then the pixel corresponds to the metadata and the image corresponds to the data. (pixel: The smallest element of a display image, corresponding to a single displayed spot or color triad on a display, or to a single spot from a camera, Academic Press Dictionary of Science and Technology from Elsevier Science & Technology; Copyright 1992, 1996 by Academic Press).

10. Applicant argues that the applied art fails to disclose; "a data volume that stores file metadata corresponding to files stored in secondary storage".

Examiner respectfully disagrees. The combination of Toda in view of BABA does disclose: a file data volume for storing file metadata that corresponds to image file stored in a secondary storage for a host system (Fig. 7 and 8, Page 3, and 9, [0055], [0056], and [0142], lines 10 – 13, 1 – 5, and 12 – 14; respectively; "the sets of black

pixels shown in FIG. 7 form text areas...”, “...these sets of black pixels are grouped based on near positions, and matches of widths and heights, 17 text areas can be detected, as shown in FIG. 8. The coordinate data of these areas are stored in a RAM (not shown) as text area coordinate data 109 shown in FIG.1.”; wherein the pixels corresponds to file metadata as claimed; and wherein the text areas formed by the pixels corresponds to file data volume as claimed; Toda; and also see – Page 8, [0135], lines 5 – 10, Toda).

11. Applicant argues that the applied art fails to disclose; “a file selector that retrieves file metadata from such a volume and compares the retrieved metadata to at least one downgrade threshold”

Examiner respectfully disagrees. The combination of Toda in view of BABA does disclose: a file selector for retrieving file metadata from the file data volume (Page 5, [0087], lines 1 – 8; “...one or more text areas are extracted from the image ...”; wherein the “text area detector” corresponds to the file selector claimed; Toda) and comparing the retrieved metadata to at least one downgrade threshold to identify an image file stored in the secondary storage of the host system for downgrading (Page 5 and 6, [0088] and [0094], lines 8 – 12 and 3 – 7; respectively; “...binarizes a pixel to black if the absolute value exceeds a threshold value or white if the absolute value does not exceed the threshold value...”, and “... if the number of areas with large coefficients of high-frequency portions ... result is equal to or larger than a threshold value...”, Toda).

12. In response to applicant's argument regarding **claim 15** that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "does not describe the text area detector retrieving the text coordinate data from a data volume to perform the area coupling", "does not disclose a file management system that selectively downgrades files to replace files maintained in secondary storage while keeping the file from which the downgraded file was generated in tertiary storage", "the controller as comparing metadata...", "selects files for compression", "writes an images document to the external storage device", "selection of an image document...") are not recited in the rejected claim(s). **Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).** USPTO personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim should not be read into the claim. *E-Pass Techs., Inc. v. 3Com Corp.*, 343 F.3d 1364, 1369, 67 USPQ2d 1947, 1950 (Fed. Cir. 2003) (claims must be interpreted "in view of the specification" without importing limitations from the specification into the claims unnecessarily). *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541,550- 551 (CCPA 1969). See also *In re Zletz*, 893 F.2d 319,321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989)

13. Applicant argues that; "Toda cannot perform the function of storing an identified image file because it never identified an image file in secondary storage for downgrading...".

Examiner respectfully disagrees. As discussed in response to arguments # 3, the combination of Toda in view of BABA does disclose storing the identified image file in tertiary storage of the host system (Fig. 28, item 2804, Page 8, [0135], lines 4 – 10; wherein the examiner interprets that since the image file was taken from the external storage then the image file was previously stored in such external storage; note also that Toda has been used only for purposes of: storing image file in tertiary storage and not for purposes of: storing identified image file in tertiary storage; see also rejection of claim 1 in this Office Action above; Toda; and Page 7, [0102], lines 9 – 15; "...original image are stored in an external storage device, such as a hard drive device, which is then accessed for performing image data processing operations...", BABA).

14. In response to applicant's argument that: "The Examiner's efforts to reassemble the components of Toda into Applicant's claimed invention require creative use of Applicant's specification as blueprint. Such hindsight use of Applicant's specification is inappropriate and the ground of rejection for claim 15 should be withdrawn", it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a

reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

15. Applicant argues that the applied art fails to disclose; “a compressor for compressing an identified image file” and “storage of the uncompressed file to tertiary storage”.

Examiner respectfully disagrees. The combination of Toda in view of BABA does disclose a compressor for compressing the identified image file (Page 3, [0049], lines 17 – 19, compression unit, Toda).

Also, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., “...storage of the uncompressed file to tertiary storage ...”) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

16. Applicant argues that the applied art fails to disclose; “black pixel reduction in thin-line conversion requires a reduction in bit size of image pixels”, and that “a file reducer having a pixel size reducer in combination with a file selector and a file controller so the identified image file in which pixel size has been reduced to generate a downgraded file that is stored in secondary storage, from which the original image



document was retrieved, while the original image document is stored in tertiary storage, which is slower than the secondary storage”.

Examiner respectfully disagrees. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., “black pixel reduction in thin-line conversion requires a reduction in bit size of image pixels” and “...pixel size has been reduced to generate a downgraded file that is stored in secondary storage, **from which the original image document was retrieved, while the original image document is stored in tertiary storage, which is slower than the secondary storage...**”) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

17. Applicant argues that; “The Examiner has failed to prove that one would combine the teachings of Gleicher with the Toda reference”, and that; “the Toda reference explicitly teaches away the lossless compression of an image file as required by claim 3”.

Examiner respectfully disagrees. As discussed in Office Action dated May 26, 2007, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the Gleicher's teachings regarding lossless compression to the system for compression of the combination of Toda in view of BABA. Skilled artisan would have been motivated to do so, as suggested by Gleicher

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(Col. 4, lines 52 – 57, Gleicher), to provide a method such that original image can be reconstructed exactly, with no loss of information, on the same computer that compressed it or on a smaller scientific or engineering workstation. In addition, since the applied references (Toda, BABA, and Gleicher) teach features that are directed to analogous art and they are directed to the same field of endeavor (such as, databases management systems, image compression, and downgrading images) the Toda reference does not teach away the lossless compression of an image file as required by the claim.

18. Applicant argues that the applied art fails to disclose; “the storage of an identified image file that has been lossy compressed in secondary storage and the storage of the identified image file in tertiary storage, the secondary storage having a faster access time than the tertiary storage”.

Examiner respectfully disagrees. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., “...secondary storage and the storage of the identified image file in tertiary storage, **the secondary storage having a faster access time than the tertiary storage** ...”) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

***Conclusion***

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

***Prior Art Made Of Record***

1. Toda et al. (US Patent No. 2002/0037100 A1, filed: August 20, 2001) discloses image processing apparatus and method.
2. Gleicher et al. (Gleicher hereinafter) (US Patent No. 5,218,431, issued: June 8, 1993) discloses a raster image lossless compression and decompression with dynamic color lookup and two dimensional area encoding.
3. Bryniarski et al. (US Patent No. 5,974,182, issued: October 26, 1999) discloses a photographic image compression method and system.
4. Sitka (US Patent No. 6,330,572 B1, issued: December 11, 2001) discloses a hierarchical data storage management.
5. Hill (US Patent No. 7,020,658 B1, filed June 4, 2001).
6. BABA et al. (US Patent Pub. No. 2001/0014172 A1, issued: August 16, 2001).

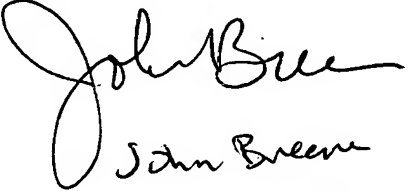
***Points Of Contact***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Giovanna Colan whose telephone number is (571) 272-2752. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Giovanna Colan  
Examiner  
Art Unit 2162  
November 23, 2007

  
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